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NAVY PERSONNEL RESEARCH AND DEVELOPMENT CENTER SAN DIEGO, CALIFORNIA 92152

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LIFE CYCLE NAVY ENLISTED BILLET COSTS--FY78

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LIFE CYCLE NAVY ENLISTED BILLET COSTS--FY78

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FOREWORD

These data and procedures have been assembled in support of Navy Decision Coordinating Paper, Manpower Requirements Development System (NDCP-Z0109-PN) under subproject Z0109-PN.03, Manpower Cost in Systems Design, and under the sponsorship of the Deputy Chief of Naval Operations (OP-01). The subproject is directed toward the application of human engineering technology in the development of procedures to incorporate hardware/software/personnel trade-offs and cost benefit alternatives in all stages of system design.

This report is the second in a series designed to provide hardware system managers, systems designers, and design engineers with objective manpower resources and life-cycle billet cost data upon which to base design decisions. It supersedes the first report issued--NPRDC Special Report 77-16 of September 1977, which presented life-cycle Navy enlisted billet costs based on FY77 data. Other design tools being developed under this effort are listed in the section entitled "Future Plans."

The life-cycle billet cost data contained herein (Appendix B) was prepared under contract by B-K Dynamics, Inc., of Rockville, MD.

J. J. CLARKIN
Commanding Officer

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INTRODUCTION

Problem

Personnel costs currently constitute the major percentage of the actual costs of Navy operational systems. Salaries and related costs for personnel constitute 56 percent of the total DoD yearly budget.¹ A cost analysis of the DD 963 destroyer showed that manning costs comprised 58 percent of the expected 20-year operational support costs.²

If Navy hardware program managers and systems engineers are to make informed decisions on cost-effective design alternatives, they must have information on the life-cycle costs of specific operator and maintenance personnel.

Background

The life-cycle billet cost for an individual is the estimated average total cost over a fixed number of years of a man with a given rating in a given pay grade. This cost includes:

1. Direct costs, including base pay, allowances, hazard pay, proficiency pay, and medical costs.
2. Training and retirement costs, which are amortized over the number of years personnel are expected to remain in service (based on historical continuation rates). These costs include liability annuities and reenlistment bonuses that are applicable for certain ratings.
3. Overhead (fixed) costs, which are associated with all personnel regardless of rating and pay grades (e.g., those incurred for maintaining medical and training facilities).

It does not include costs relating to systems management personnel, personal skill development requirements, officer complements, and external military tasks (e.g., compartment cleaning, mess duties, and other special details).

¹Medin, A. L. Environmental and life sciences research and development. Defense Management Journal, 1974, 10, 2-5.

²Office of the Director of Defense Research and Engineering (DDR&E). Technology coordination paper-human resources. Washington, D. C.: Author, March 1973.

NAVPERSRANDCEN Special Report 77-16 provided life-cycle Navy enlisted billet costs based on FY77 military pay rates.³ However, that information is now outdated.

Objective

The objective of this research and development effort was to provide program managers and systems engineers with the latest available data (based on FY78 military pay rates) on the life-cycle costs of Navy enlisted personnel by ratings and pay grades for 1, 5, 10, 15, and 20-year periods. The figures in the multiple-year (5, 10, 15, and 20) computations are based on the current discount rate of 7 percent.

This information will enable managers and engineers to predict the life-cycle costs of operator and maintenance personnel, and permit them to make decisions by (1) weighing costs of candidate system approaches that may be more manpower intensive against those that may be less manpower intensive, and (2) comparing hardware, software, and manpower costs of such approaches.

³Martin, J. I., Koehler, E. A., Mairs, L. S., & Hogan, P. F. Life cycle Navy enlisted billet costs tables--FY77 (NPRDC Special Rep. 77-16). San Diego, CA: Navy Personnel Research and Development Center, September 1977.

USER INSTRUCTIONS

To facilitate the use of the life-cycle costing data, two indices--by rating title and rating abbreviation--are provided in Appendix A and the data themselves are in Appendix B. This arrangement has been adopted for use in this and succeeding reports so that experienced users will be able to turn directly to the back of the report to find the information necessary for their computations.

Data Source

The costs included in Appendix B are based upon costing information available in the Billet Cost Model, which was developed and is being maintained by the Bureau of Naval Personnel (Pers-2). The structure and format of the data base for the Billet Cost Model were developed by the SECNAV Task Force on Personnel Retention in 1966. Over the years, adjustments have been made in their data base to cope with changing data sources, formats, and availability and to take advantage of new information as it has become available. The data elements and sources used in computing the life-cycle costs in Appendix B are itemized in Table 1. As shown, the primary sources of data are the various budget documents that provide information for the past reporting period as well as justification for, and some detail on, money requirements for the upcoming period. After the expenditures have been identified, they are distributed to the ratings wherever possible--a critical step that results in cost differentiation among ratings. Those that are not applicable to a given rating are applied equally across all ratings in the annual cost by year or grade element.

Index Use

The indices in Appendix A provide the user with easy entry into the life-cycle billet cost data in Appendix B. For example, if a tactical data system is being designed that will be operated by an Operations Specialist, the user would refer to the Index by Rating Title to find the abbreviation of the rating (OS) and the page number of Appendix B (p. B-13) on which the billet cost information for that rating appears. Alternatively, if the rating abbreviation is known, he would refer to the Index by Rating Abbreviation to find the appropriate page number.

Cost Computation

When the user finds the billet cost information for the rating, he decides on the number and the rating level (E-2 through E-9) of the personnel needed and the number of years that he anticipates the system will be operational. Most systems have skill requirements equivalent to pay grades ranging from E-4 (entry level operator) to E-7 (highly experienced evaluator). To illustrate, if the user decides that he needed one OS E-4 and that the system will be operational for 15 years, he would locate that pay grade in the first column and read across the row until he comes to the column for the 15-year period. As shown on page B-13, the life-cycle billet cost would be \$137,490 for each unit.

Table 1
Factors Included in Billet Cost Model Computations

Data Element	Action/Source
Base Pay	31 Oct 1977 from BuPers 24
Clothing Allowance	MPN/Pay Manual ^a
Command and Administration	O&MN
Commissary	O&MN
Death Gratuity	MPN
Dependent School	DoD Dependent School Office
Disability	MPN
E-7 Clothing Allowance	MPN
Exchange	Nonappropriated Funds
Family Separation Allowance	MPN
FICA	6.02% of first \$17,500 from SSA
Hazard Pay	MPN
Insurance/Housing	DoD McClary Report
Medical Costs	BUMED Comptroller; O&MN, Budget Activity 8
Messing Subsistence	MPN/Pay Manual
Overseas Station Allowance	MPN
Prisoner Apprehension	MPN
Procurement Personnel	MPN
Pro-Pay	Not updated, not available from JUMPS yet (small variations in ratings this year)
Quarters Allowance	Imputed value from MPN for MILCON equivalent for base housing; MPN Pay Table for off-base housing
Recreation Facilities	In Command/Administration above
Recruit Costs	O&MN (less travel)
Reenlistment Bonus	Computed from reenlistment statistics by LOS (E211) and by grade (Green Book VRB/SRB rating eligibility)
Retirement	Computed from force statistics and entitlements from Pay Manual
School Costs	O&MN
Sea and Foreign Duty Pay	MPN
Servicemen's Group Life Insurance	MPN
Settlement Costs	Computed from force statistics and Pay Manual
Severance	MPN
Travel	MPN tied to PCS move pattern and training patterns
Tuition Assistance	Not included, details not available

^aMPN/O&MN budgets are from Congressional Submit., January 1977;
Pay Manual is DoD Military Pay, Entitlements, Allowance Manual, 1968, amended.

Although using costing information in computing life-cycle billet costs has led, on occasion, to counterintuitive results, such results do, nevertheless, reflect actual cost differences and are based on fact. For example, within some ratings, there are only slight differences in costs between some of the pay grades or reversals between two pay grades (e.g., at the E-8 level, the ABE costs more than at the E-9 level). This is because previously separate specialities have been combined or because differences in expenditures such as those for training have altered the relative costs.

If the user decides that the system must be staffed by three OS E-4s and one OS E-6, he would refer to Appendix B, make two computations, and add them together to find the total cost per unit.

<u>Rating</u>	<u>Level</u>	<u>15-Year Life Cycle</u>	<u>Number of Men</u>	<u>Life Cycle Costs Per Unit</u>
OS	E-4	\$137,490	3	\$412,470
OS	E-6	\$204,090	1	\$204,090
				<hr/> \$616,560

Next, the user must decide how many hours of each day the system must be manned. For example, if the system is to be operated continuously over a 24-hour period, the initial billet cost estimation per shift for the three E-4s and one E-6 (i.e., \$616,560) must be multiplied by three to account for three 8-hour shifts:

\$616,560 per shift x 3 shifts = \$1,849,680 per unit.

Finally, the user must decide how much life-cycle costs for maintenance personnel will add to the total cost of the system. For example, if he decides that the maintenance of the system used in the previous example will require a Data System Technician (DS) at the E-5 level for 8 hours a day and an Electronics Technician (Radar) (ETR) at the E-4 level for 4 hours a day, he would need to compute these costs and add the results of these computations to determine the total estimated life-cycle billet costs per unit.

<u>Rating</u>	<u>Level</u>	<u>15-Year Life Cycle</u>	<u>Number of Man/Days</u>	<u>Life-Cycle Costs</u>
DS	E-5	\$171,950	1.0	\$ 171,950
ETR	E-4	\$161,892	0.5	\$ 80,946
Operator Costs (as determined from previous example)				<hr/> \$1,849,680
				<hr/> \$2,102,576

As was noted earlier, these estimated life-cycle billet costs do not include those cost items relating to systems management personnel, officer assignments, and external military tasks. The tables do, however, permit a more nearly accurate assessment of the life-cycle costs of operator and maintenance personnel than has previously been possible.

Discount Rate Computation

The multiple-year billet cost tables included in this report have been computed using a 7 percent discount rate. According to the Office of Management and Budget Circular A-76,⁴ the discount rate can be computed using the average interest rate of long-term treasury notes during the previous 12 months. This equates to approximately a 7 percent discount for this last period and has been used for the computations in this report.

The 1-year cost figures do not reflect a discount or interest rate. Therefore, if the user needs to apply a discount rate other than 7 percent for multiple-year projections, the 1-year costs should be used as the base for such computations. For example, if no discount rate is to be applied and the billet costs for a 10-year period are desired, then the 1-year cost figure should be multiplied by 10. The resultant figure will reflect costs based upon FY78 dollars.

If a discount rate other than that reflected in the cost tables in Appendix B needs to be applied, the following formula can be used with the 1-year cost figure:

$$S_n = \left[1 - \left(\frac{1}{1+r} \right)^n \right] \left[\left(\frac{1+r}{r} \right) (x) \right]$$

where:

S = Billet cost
n = Number of years in billet life
r = Discount rate
x = Billet cost for first year

For example, it may be necessary to apply a 10 percent discount rate, such as prescribed by the Office of Management and Budget Circular A-94.⁵ In that case, the billet costs for an Aviation Electrician's Mate (AE), Pay Grade E-2, for a 5-year period would be computed using the following values:

n = Number of years in billet life = 5
r = Discount rate = 10 percent = .10
x = Billet cost for first year = \$12,254⁶

⁴Office of Management and Budget Circular A-76, Rev. 1: Subj: Policies for Acquiring Commercial or Industrial Products or Services for Government Use, 13 June 1977.

⁵Office of Management and Budget Circular A-94. Subj: Discount Rates to be Used in Evaluating Time, Distributed Costs, and Benefits.

⁶Taken from Appendix B, page B-2.

AE (E-2) 5-Year Billet
 Cost using a 10 percent
 discount rate

$$\begin{aligned}
 &= \left[1 - \left(\frac{1}{1 + .10} \right)^5 \right] \left[\left(\frac{1 + .10}{.10} \right) (x) \right] \\
 &= [1 - (.90909)^5] \times [11 \times 12,254] \\
 &= (1 - .6209181) \times 11 \times 12,254 \\
 &= .3790819 \times 11 \times 12,254 \\
 &= \$51,097.965 \text{ or} \\
 &= \$51,098.00
 \end{aligned}$$

FUTURE PLANS

It is anticipated that life-cycle Navy enlisted billet costs will be recomputed, updated, and published at yearly intervals, using the latest available costing information and the prevailing discount rates.

A number of other tools are being or will be developed to assist engineers in their task of designing systems for more effective use of the Navy's manpower resources. These include the following:

1. Billet life-cycle costs for those who operate and maintain specific fleet hardware systems and for whom Navy Enlisted Classification (NEC) codes exist. This NEC life-cycle billet costs guide, based on Navy Billet Cost Model information, will be available later in FY78.
2. Life-cycle billet costs guides for Navy officers, reserve personnel, and civilian support personnel.
3. Information handbook for use by engineers in rapidly and easily assessing the people-related implications of their designs in the concept formulation steps.
4. Training technology aid for projecting training costs for newly developed hardware systems, for estimating training system costs and characteristics, and for forecasting such training costs and system characteristics up to 20 years into the future.

Reports describing these tools will be distributed to selected agencies, activities, and codes as they become available. In the meantime, information can be obtained by contacting the authors of this report at (714) 225-6617 (AUTOVON 933-6617).

APPENDIX A
INDICES BY RATING TITLE AND BY RATING ABBREVIATION

INDEX BY RATING TITLE

	<u>Rating Title</u>	<u>Abbreviation</u>	<u>Appendix B</u> <u>Page No.</u>
AEROGRAPHER'S MATE	AG	2
AIR CONTROLMAN	AC	1
AIRCREW SURVIVAL EQUIPMENTMAN	PR	14
AVIATION ANTISUBMARINE WARFARE OPERATOR	AW	4
Aviation Antisubmarine Warfare Operator (Acoustic)	AW	4
Aviation Antisubmarine Warfare Operator (Helicopter)	AW	4
Aviation Antisubmarine Warfare Operator (Non-Acoustic)	AW	4
AVIATION ANTISUBMARINE WARFARE TECHNICIAN	AX	4
AVIATION BOATSWAIN'S MATE	AB	1
Aviation Boatswain's Mate (Launching & Recovery Equipment)	ABE	1
Aviation Boatswain's Mate (Fuels)	ABF	1
Aviation Boatswain's Mate (Aircraft Handling)	ABH	1
AVIATION ELECTRICIAN'S MATE	AE	2
AVIATION ELECTRONICS TECHNICIAN	AT	4
AVIATION FIRE CONTROL TECHNICIAN	AQ	3
AVIATION MACHINIST'S MATE (includes AFCM)	AD	1
Aviation Machinist's Mate (Jet Engine Mechanic)	AD	1
Aviation Machinist's Mate (Reciprocating Engine Mechanic)	AD	1
AVIATION MAINTENANCE ADMINISTRATIONMAN	AZ	4
AVIATION ORDNANCEMAN	AO	3
AVIATION STOREKEEPER	AK	2
AVIATION STRUCTURAL MECHANIC	AM	2
Aviation Structural Mechanic (Safety Equipment)	AME	2
Aviation Structural Mechanic (Hydraulics)	AMH	2
Aviation Structural Mechanic (Structures)	AMS	3
AVIATION SUPPORT EQUIPMENT TECHNICIAN	AS	3
Aviation Support Equipment Technician (Electrical)	ASE	3
Aviation Support Equipment Technician (Hydraulics & Structures)	ASH	3
Aviation Support Equipment Technician (Mechanical)	ASM	4
BOATSWAIN'S MATE	BM	4
BOILER TECHNICIAN	BT	5
BUILDER (includes CUCM)	BU	5
COMMUNICATIONS TECHNICIAN	CT	--
Communications Technician (Administrative Branch)	CTA	5
Communications Technician (Interpretive Branch)	CTI	5
Communications Technician (Maintenance Branch)	CTM	6
Communications Technician (Communications Branch)	CTO	6
Communications Technician (Collection Branch)	CTR	6
Communications Technician (Technical Branch)	CTT	6
CONSTRUCTION ELECTRICIAN	CE	5
CONSTRUCTION MECHANIC	CM	5
DATA PROCESSING TECHNICIAN	DP	7
DATA SYSTEMS TECHNICIAN	DS	7
DENTAL TECHNICIAN	DT	7
Dental Technician (General)	DT	7
Dental Technician (Prosthodontics)	DT	7
Dental Technician (Repair)	DT	7
DISBURSING CLERK	DK	6
ELECTRICIAN'S MATE	EM	7

INDEX BY RATING TITLE (Continued)

<u>Rating Title</u>	<u>Abbreviation</u>	Appendix B <u>Page No.</u>
ELECTRONICS TECHNICIAN	ET	8
Electronics Technician (Communications)	ETN	8
Electronics Technician (Radar)	ETR	8
ELECTRONICS WARFARE TECHNICIAN	EW	8
ENGINEERING AID	EA	7
ENGINEMAN	EN	7
EQUIPMENT OPERATOR	EO	8
FIRE CONTROL TECHNICIAN	FT	8
Fire Control Technician (Ballistic Missile Fire Control)	FTB	9
Fire Control Technician (Gun Fire Control)	FTG	9
Fire Control Technician (Surface Missile Fire Control)	FTM	9
GUNNER'S MATE	GM	9
Gunner's Mate (Guns)	GMG	9
Gunner's Mate (Missiles)	GMM	9
Gunner's Mate (Technician)	GMT	10
HOSPITAL CORPSMAN	HM	10
HULL MAINTENANCE TECHNICIAN	HT	10
ILLUSTRATOR DRAFTSMAN	DM	6
INSTRUMENTMAN	IM	10
INTELLIGENCE SPECIALIST	IS	10
INTERIOR COMMUNICATIONS ELECTRICIAN	IC	10
JOURNALIST	JO	11
LEGALMAN	LN	11
LITHOGRAPHER	LI	11
MACHINERY REPAIRMAN	MR	12
MACHINIST'S MATE	MM	11
MASTER-AT-ARMS	MA	11
MESS MANAGEMENT SPECIALIST	MS	12
MINEMAN	MN	12
MISSILE TECHNICIAN	MT	12
MOLDER	ML	11
MUSICIAN	MU	12
NAVY COUNSELOR	NC	12
OCEAN SYSTEMS TECHNICIAN	OT	13
OPERATIONS SPECIALIST	OS	13
OPTICALMAN	OM	13
PATTERNMAKER	PM	13
PERSONNELMAN	PN	14
PHOTOGRAPHER'S MATE	PH	13
POSTAL CLERK	PC	13
QUARTERMASTER	QM	14
RADIOMAN	RM	14
SHIP'S SERVICEMAN	SH	14
SIGNALMAN	SM	15
SONAR TECHNICIAN	ST	15
Sonar Technician (Surface)	STG	15
Sonar Technician (Submarine)	STS	15
STEELWORKER	SW	15
STOREKEEPER	SK	14

INDEX BY RATING TITLE (Continued)

<u>Rating Title</u>	<u>Abbreviation</u>	Appendix B <u>Page No.</u>
TORPEDOMAN'S MATE	TM	16
Torpedoman's Mate (Submarine)	TM	16
Torpedoman's Mate (Surface)	TM	16
Torpedoman's Mate (Technician)	TM	16
TRADESMAN	TD	15
UTILITIESMAN	UT	16
YEOMAN	YN	16

INDEX BY RATING ABBREVIATION

<u>Abbreviation</u>	<u>Appendix B Page No.</u>	<u>Rating Title</u>
AB	1	AVIATION BOATSWAIN'S MATE
ABE	1	Aviation Boatswain's Mate (Launching & Recovery Equipment)
ABF	1	Aviation Boatswain's Mate (Fuels)
ABH	1	Aviation Boatswain's Mate (Aircraft Handling)
AC	1	AIR CONTROLMAN
AD	1	AVIATION MACHINIST'S MATE
AD	1	Aviation Machinist's Mate (Jet Engine Mechanic)
AD	1	Aviation Machinist's Mate (Reciprocating Mechanic)
AE	2	AVIATION ELECTRICIAN'S MATE
AG	2	AEROGRAPHER'S MATE
AK	2	AVIATION STOREKEEPER
AM	2	AVIATION STRUCTURAL MECHANIC
AME	2	Aviation Structural Mechanic (Safety Equipment)
AMH	2	Aviation Structural Mechanic (Hydraulics)
AMS	3	Aviation Structural Mechanic (Structures)
AO	3	AVIATION ORDNANCEMAN
AQ	3	AVIATION FIRE CONTROL TECHNICIAN
AS	3	AVIATION SUPPORT EQUIPMENT TECHNICIAN
ASE	3	Aviation Support Equipment Technician (Electrical)
ASH	3	Aviation Support Equipment Technician (Hydraulics and Structures)
ASM	4	Aviation Support Equipment Technician (Mechanical)
AT	4	AVIATION ELECTRONICS TECHNICIAN
AW	4	AVIATION ANTISUBMARINE WARFARE OPERATOR
AW	4	Aviation Antisubmarine Warfare Operator (Acoustic)
AW	4	Aviation Antisubmarine Warfare Operator (Helicopter)
AW	4	Aviation Antisubmarine Warfare Operator (Non-Acoustic)
AX	4	AVIATION ANTISUBMARINE WARFARE TECHNICIAN
AZ	4	AVIATION MAINTENANCE ADMINISTRATIONMAN
BM	4	BOATSWAIN'S MATE
BT	5	BOILER TECHNICIAN
BU	5	BUILDER
CE	5	CONSTRUCTION ELECTRICIAN
CM	5	CONSTRUCTION MECHANIC
CT	--	COMMUNICATIONS TECHNICIAN
CTA	5	Communications Technician (Administration Branch)
CTI	5	Communications Technician (Interpretive Branch)
CTM	6	Communications Technician (Maintenance Branch)
CTO	6	Communications Technician (Communications Branch)
CTR	6	Communications Technician (Collection Branch)
CTT	6	Communications Technician (Technical Branch)
DK	6	DISEURSING CLERK
DM	6	ILLUSTRATOR DRAFTSMAN
DP	7	DATA PROCESSING TECHNICIAN
DS	7	DATA SYSTEMS TECHNICIAN
DT	7	DENTAL TECHNICIAN
DT	7	Dental Technician (General)
DT	7	Dental Technician (Prosthodontics)
DT	7	Dental Technician (Repair)

INDEX BY RATING ABBREVIATION (Continued)

Appendix B		
<u>Abbreviation</u>	<u>Page No.</u>	<u>Rating Title</u>
EA	7	ENGINEERING AID
EM	7	ELECTRICIAN'S MATE
EN	7	ENGINEMAN
EO	8	EQUIPMENT OPERATOR
ET	8	ELECTRONICS TECHNICIAN
ETN	8	Electronics Technician (Communications)
ETR	8	Electronics Technician (Radar)
EW	8	ELECTRONICS WARFARE TECHNICIAN
FT	8	FIRE CONTROL TECHNICIAN
FTB	9	Fire Control Technician (Ballistic Missile Fire Control)
FTG	9	Fire Control Technician (Gun Fire Control)
FTM	9	Fire Control Technician (Surface Missile Fire Control)
GM	9	GUNNER'S MATE
GMG	9	Gunner's Mate (Guns)
GMM	9	Gunner's Mate (Missiles)
GMT	10	Gunner's Mate (Technician)
HM	10	HOSPITAL CORPSMAN
HT	10	HULL MAINTENANCE TECHNICIAN
IC	10	INTERIOR COMMUNICATIONS ELECTRICIAN (includes EMCM)
IM	10	INSTRUMENTMAN (includes PICM)
IS	10	INTELLIGENCE SPECIALIST
JO	11	JOURNALIST
LI	11	LITHOGRAPHER
LN	11	LEGALMAN
MA	11	MASTER-AT-ARMS
ML	11	MOLDER
MM	11	MACHINIST'S MATE
MN	12	MINEMAN
MR	12	MACHINERY REPAIRMAN
MS	12	MESS MANAGEMENT SPECIALIST
MT	12	MISSILE TECHNICIAN
MU	12	MUSICIAN
NC	12	NAVY COUNSELOR
OM	13	OPTICALMAN (includes PICM)
OS	13	OPERATIONS SPECIALIST
OT	13	OCEAN SYSTEMS TECHNICIAN
PC	13	POSTAL CLERK
PH	13	PHOTOGRAPHER'S MATE
PM	13	PATTERNMAKER (includes MLCM)
PN	14	PERSONNELMAN
PR	14	AIRCREW SURVIVAL EQUIPMENTMAN
QM	14	QUARTERMASTER
RM	14	RADIOMAN
SH	14	SHIP'S SERVICEMAN
SK	14	STOREKEEPER
SM	15	SIGNALMAN
ST	15	SONAR TECHNICIAN
STG	15	Sonar Technician (Surface)
STS	15	Sonar Technician (Submarine)

INDEX BY RATING ABBREVIATION (Continued)

<u>Abbreviation</u>	<u>Appendix B Page No.</u>	<u>Rating Title</u>
SW	15	STEELWORKER (includes CUCM)
TD	15	TRADESMAN
TM	16	TORPEDOMAN'S MATE
TM	16	Torpedoman's Mate (Submarine)
TM	16	Torpedoman's Mate (Surface)
TM	16	Torpedoman's Mate (Technician)
UT	16	UTILITIESMAN
YN	16	YEOMAN

APPENDIX B

LIFE-CYCLE NAVY ENLISTED BILLET COSTS BY RATING AND PAY GRADE

APPENDIX B

Life-Cycle Billet Costs by Rating and Pay Grade

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
AB	E-2	10885.	47755.	81803.	106080.	123389.
AB	E-3	11299.	49571.	84915.	110114.	128082.
AB	E-4	12857.	56406.	96624.	125298.	145742.
AB	E-5	14615.	64119.	109835.	142431.	165671.
AB	E-6	19244.	84428.	144623.	187542.	218143.
AB	E-7	21472.	94202.	161367.	209255.	243399.
AB	E-8	23318.	102301.	175241.	227246.	264325.
AB	E-9	25983.	113993.	195269.	253217.	294534.
		1	5	10	15	20
ABE	E-2	11219.	49220.	84314.	109335.	127175.
ABE	E-3	11633.	51036.	87425.	113369.	131868.
ABE	E-4	13323.	58451.	100126.	129839.	151025.
ABE	E-5	14997.	65795.	112706.	146153.	170001.
ABE	E-6	20296.	89043.	152529.	197795.	230068.
ABE	E-7	22403.	98287.	168364.	218329.	253953.
ABE	E-8	27241.	119512.	204723.	265477.	308794.
ABE	E-9	26332.	115524.	197892.	256619.	298490.
		1	5	10	15	20
ABF	E-2	11216.	49207.	84291.	109306.	127141.
ABF	E-3	11630.	51023.	87402.	113340.	131834.
ABF	E-4	13121.	57565.	98608.	127871.	148735.
ABF	E-5	14866.	65220.	111722.	144877.	168516.
ABF	E-6	18923.	83019.	142211.	184414.	214505.
ABF	E-7	21431.	94022.	161059.	208856.	242934.
ABF	E-8	23710.	104021.	178187.	231066.	268768.
ABF	E-9	25719.	112835.	193285.	250645.	291542.
		1	5	10	15	20
ABH	E-2	10628.	46627.	79872.	103575.	120475.
ABH	E-3	11042.	48444.	82983.	107610.	125168.
ABH	E-4	12500.	54840.	93941.	121819.	141696.
ABH	E-5	14299.	62733.	107461.	139351.	162088.
ABH	E-6	19196.	84217.	144263.	187075.	217599.
ABH	E-7	21213.	93066.	159421.	206731.	240463.
ABH	E-8	22924.	100573.	172280.	223406.	259858.
ABH	E-9	25779.	113098.	193736.	251229.	292222.
		1	5	10	15	20
AC	E-2	14137.	62022.	106243.	137772.	160252.
AC	E-3	11196.	49119.	84141.	109111.	126914.
AC	E-4	13572.	59543.	101997.	132266.	153847.
AC	E-5	16830.	73837.	126482.	164017.	190779.
AC	E-6	17735.	77807.	133283.	172837.	201038.
AC	E-7	22628.	99274.	170055.	220521.	256503.
AC	E-8	23973.	105175.	180163.	233629.	271750.
AC	E-9	26380.	115735.	198252.	257086.	299034.
		1	5	10	15	20
AD	E-2	14114.	61921.	106070.	137548.	159991.
AD	E-3	10959.	48079.	82360.	106801.	124227.
AD	E-4	12540.	55016.	94241.	122209.	142149.
AD	E-5	14889.	65321.	111895.	145101.	168776.
AD	E-6	18653.	81835.	140182.	181783.	211444.
AD	E-7	20992.	92096.	157760.	204578.	237958.
AD	E-8	23831.	104552.	179096.	232245.	270140.
AD	E-9	25262.	110830.	189850.	246191.	286361.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
AE	E-2	12254.	53761.	92092.	119421.	138907.
AE	E-3	12675.	55608.	95256.	123524.	143679.
AE	E-4	14948.	65580.	112338.	145676.	169445.
AE	E-5	15831.	69454.	118974.	154281.	179455.
AE	E-6	19554.	85788.	146953.	190564.	221657.
AE	E-7	24564.	107768.	184605.	239389.	278449.
AE	E-8	27050.	118674.	203287.	263616.	306629.
AE	E-9	28806.	126378.	216484.	280729.	326535.
		1	5	10	15	20
AG	E-2	14346.	62939.	107814.	139809.	162621.
AG	E-3	11576.	50786.	86997.	112814.	131221.
AG	E-4	13112.	57525.	98540.	127783.	148633.
AG	E-5	14698.	64483.	110459.	143239.	166611.
AG	E-6	18183.	79773.	136650.	177203.	206116.
AG	E-7	21920.	96168.	164734.	213621.	248477.
AG	E-8	23114.	101406.	173707.	225258.	262012.
AG	E-9	25665.	112598.	192879.	250118.	290929.
		1	5	10	15	20
AK	E-2	15071.	66120.	113262.	146874.	170840.
AK	E-3	10835.	47535.	81428.	105593.	122822.
AK	E-4	12504.	54858.	93971.	121858.	141741.
AK	E-5	14942.	65554.	112293.	145617.	169377.
AK	E-6	18905.	82940.	142076.	184239.	214300.
AK	E-7	22598.	99142.	169830.	220229.	256163.
AK	E-8	23860.	104679.	179314.	232528.	270469.
AK	E-9	26356.	115629.	198072.	256853.	298762.
		1	5	10	15	20
AM	E-2	11898.	52199.	89416.	115952.	134872.
AM	E-3	12312.	54015.	92528.	119987.	139565.
AM	E-4	14007.	61452.	105266.	136505.	158778.
AM	E-5	15011.	65856.	112811.	146290.	170159.
AM	E-6	18904.	82936.	142068.	184229.	214289.
AM	E-7	23353.	102455.	175504.	227587.	264721.
AM	E-8	25327.	111115.	190339.	246824.	287098.
AM	E-9	26407.	115853.	198455.	257350.	299341.
		1	5	10	15	20
AME	E-2	11884.	52138.	89311.	115816.	134713.
AME	E-3	12298.	53954.	92423.	119850.	139406.
AME	E-4	13490.	59184.	101381.	131467.	152918.
AME	E-5	15439.	67734.	116028.	150461.	175011.
AME	E-6	19713.	86485.	148148.	192113.	223460.
AME	E-7	24064.	105574.	180847.	234516.	272781.
AME	E-8	24102.	105741.	181133.	234886.	273212.
AME	E-9	25398.	111427.	190872.	247516.	287903.
		1	5	10	15	20
AMH	E-2	12075.	52976.	90747.	117677.	136878.
AMH	E-3	12516.	54910.	94061.	121975.	141877.
AMH	E-4	14490.	63571.	108896.	141212.	164254.
AMH	E-5	15008.	65843.	112789.	146261.	170125.
AMH	E-6	18685.	81975.	140422.	182095.	211807.
AMH	E-7	23161.	101612.	174061.	225716.	262545.
AMH	E-8	24912.	109294.	187220.	242780.	282394.
AMH	E-9	26304.	115401.	197681.	256346.	298173.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
AMS	E-2	11724.	51436.	88109.	114256.	132899.
AMS	E-3	12162.	53357.	91400.	118525.	137864.
AMS	E-4	13879.	60890.	104304.	135258.	157327.
AMS	E-5	15094.	66221.	113435.	147099.	171100.
AMS	E-6	19143.	83984.	143864.	186558.	216998.
AMS	E-7	24345.	106807.	182959.	237254.	275966.
AMS	E-8	25097.	110106.	188610.	244583.	284491.
AMS	E-9	26663.	116976.	200379.	259844.	302242.
		1	5	10	15	20
AO	E-2	11641.	51072.	87485.	113447.	131958.
AO	E-3	12060.	52910.	90634.	117531.	136708.
AO	E-4	13289.	58302.	99870.	129508.	150639.
AO	E-5	15370.	67432.	115509.	149788.	174229.
AO	E-6	19396.	85094.	145766.	189024.	219866.
AO	E-7	22489.	98664.	169010.	219167.	254927.
AO	E-8	23884.	104784.	179494.	232762.	270741.
AO	E-9	26389.	115774.	198320.	257174.	299136.
		1	5	10	15	20
AQ	E-2	13377.	58688.	100531.	130366.	151637.
AQ	E-3	13930.	61114.	104687.	135755.	157906.
AQ	E-4	15963.	70033.	119966.	155567.	180951.
AQ	E-5	17728.	77777.	133230.	172768.	200958.
AQ	E-6	20928.	91816.	157279.	203954.	237232.
AQ	E-7	22877.	100366.	171926.	222948.	259326.
AQ	E-8	26064.	114348.	195877.	254007.	295452.
AQ	E-9	25873.	113510.	194442.	252145.	293287.
		1	5	10	15	20
AS	E-2	11021.	48352.	82826.	107405.	124930.
AS	E-3	11435.	50168.	85937.	111440.	129623.
AS	E-4	13711.	60153.	103042.	133621.	155423.
AS	E-5	16473.	72271.	123799.	160538.	186732.
AS	E-6	19508.	85586.	146607.	190115.	221136.
AS	E-7	24071.	105605.	180900.	234584.	272860.
AS	E-8	25312.	111049.	190226.	246678.	286928.
AS	E-9	26033.	114212.	195644.	253705.	295101.
		1	5	10	15	20
ASE	E-2	11343.	49764.	85245.	110543.	128580.
ASE	E-3	11757.	51580.	88357.	114578.	133273.
ASE	E-4	14341.	62917.	107776.	139760.	162565.
ASE	E-5	18907.	82949.	142091.	184258.	214323.
ASE	E-6	19418.	85191.	145931.	189238.	220116.
ASE	E-7	22259.	97655.	167282.	216925.	252320.
ASE	E-8	23969.	105157.	180133.	233590.	271704.
ASE	E-9	26003.	114081.	195419.	253412.	294761.
		1	5	10	15	20
ASH	E-2	11814.	51831.	88785.	115133.	133919.
ASH	E-3	12228.	53647.	91896.	119168.	138612.
ASH	E-4	14108.	61895.	106025.	137490.	159923.
ASH	E-5	15581.	68357.	117095.	151845.	176621.
ASH	E-6	17851.	78316.	134155.	173967.	202353.
ASH	E-7	21239.	93180.	159616.	206985.	240758.
ASH	E-8	22949.	100682.	172467.	223650.	260142.
ASH	E-9	24983.	109606.	187753.	243472.	283199.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
ASM	E-2	10491.	46026.	78842.	102240.	118922.
ASM	E-3	10905.	47843.	81954.	106275.	123615.
ASM	E-4	13319.	58433.	100096.	129800.	150980.
ASM	E-5	16587.	72771.	124655.	161649.	188024.
ASM	E-6	20008.	87779.	150365.	194988.	226804.
ASM	E-7	30317.	133007.	227840.	295454.	343663.
ASM	E-8	31799.	139509.	238977.	309897.	360462.
ASM	E-9	32993.	144747.	247951.	321533.	373997.
		1	5	10	15	20
AT	E-2	12651.	55503.	95075.	123290.	143407.
AT	E-3	13078.	57376.	98284.	127452.	148248.
AT	E-4	15345.	67322.	115321.	149545.	173946.
AT	E-5	16693.	73236.	125452.	162682.	189226.
AT	E-6	20556.	90184.	154483.	200329.	233016.
AT	E-7	24838.	108970.	186664.	242059.	281555.
AT	E-8	26403.	115836.	198425.	257311.	299295.
AT	E-9	27423.	120311.	206091.	267251.	310858.
		1	5	10	15	20
AW	E-2	16101.	70639.	121003.	156912.	182515.
AW	E-3	13427.	58907.	100907.	130853.	152204.
AW	E-4	14032.	61561.	105454.	136749.	159062.
AW	E-5	16621.	72920.	124911.	161980.	188410.
AW	E-6	20555.	90179.	154476.	200319.	233004.
AW	E-7	23056.	101152.	173272.	224692.	261355.
AW	E-8	25880.	113541.	194495.	252214.	293367.
AW	E-9	27044.	118648.	203242.	263557.	306561.
		1	5	10	15	20
AX	E-2	13922.	61079.	104627.	135677.	157815.
AX	E-3	14337.	62900.	107746.	139721.	162519.
AX	E-4	17180.	75372.	129112.	167428.	194746.
AX	E-5	16539.	72560.	124295.	161181.	187480.
AX	E-6	20039.	87915.	150598.	195290.	227155.
AX	E-7	23761.	104245.	178570.	231563.	269346.
AX	E-8	27209.	119372.	204482.	265165.	308432.
AX	E-9	27334.	119920.	205422.	266384.	309849.
		1	5	10	15	20
AZ	E-2	15171.	66558.	114014.	147849.	171973.
AZ	E-3	10895.	47799.	81879.	106177.	123502.
AZ	E-4	12847.	56363.	96548.	125200.	145629.
AZ	E-5	15324.	67230.	115164.	149340.	173708.
AZ	E-6	18862.	82752.	141753.	183820.	213813.
AZ	E-7	21191.	92969.	159256.	206517.	240214.
AZ	E-8	23458.	102915.	176293.	228610.	265912.
AZ	E-9	26107.	114537.	196201.	254426.	295940.
		1	5	10	15	20
BM	E-2	11123.	48799.	83592.	108399.	126086.
BM	E-3	11858.	52024.	89116.	115562.	134418.
BM	E-4	12953.	56828.	97345.	126234.	146831.
BM	E-5	15651.	68664.	117621.	152527.	177414.
BM	E-6	18682.	81962.	140400.	182066.	211773.
BM	E-7	21362.	93720.	160541.	208183.	242152.
BM	E-8	23569.	103402.	177127.	229692.	267170.
BM	E-9	25991.	114028.	195329.	253295.	294625.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
BT	E-2	10377.	45526.	77986.	101129.	117630.
BT	E-3	10972.	48137.	82457.	106928.	124375.
BT	E-4	12366.	54252.	92934.	120513.	140177.
BT	E-5	15262.	66958.	114698.	148736.	173005.
BT	E-6	19643.	86178.	147622.	191431.	222666.
BT	E-7	22475.	98603.	168905.	219030.	254769.
BT	E-8	25448.	111646.	191248.	248004.	288470.
BT	E-9	27811.	122013.	209007.	271032.	315256.
		1	5	10	15	20
BU	E-2	14534.	63764.	109227.	141641.	164752.
BU	E-3	11176.	49032.	83990.	108916.	126687.
BU	E-4	13108.	57508.	98510.	127744.	148588.
BU	E-5	16102.	70643.	121011.	156922.	182527.
BU	E-6	19232.	84375.	144533.	187426.	218007.
BU	E-7	22571.	99024.	169627.	219966.	255857.
BU	E-8	26297.	115371.	197629.	256278.	298094.
BU	E-9	27224.	119438.	204595.	265312.	308602.
		1	5	10	15	20
CE	E-2	10785.	47316.	81052.	105105.	122255.
CE	E-3	11199.	49132.	84163.	109140.	126948.
CE	E-4	13012.	57086.	97788.	126809.	147499.
CE	E-5	16740.	73442.	125805.	163140.	189759.
CE	E-6	20541.	90118.	154371.	200182.	232846.
CE	E-7	22807.	100059.	171400.	222266.	258532.
CE	E-8	25447.	111641.	191241.	247994.	288458.
CE	E-9	27607.	121118.	207473.	269044.	312943.
		1	5	10	15	20
CM	E-2	14568.	63913.	109482.	141973.	165138.
CM	E-3	11313.	49633.	85020.	110251.	128240.
CM	E-4	13021.	57126.	97856.	126896.	147602.
CM	E-5	17743.	77842.	133343.	172914.	201128.
CM	E-6	22154.	97194.	166493.	215902.	251130.
CM	E-7	25674.	112637.	192947.	250206.	291031.
CM	E-8	27953.	122636.	210074.	272416.	316865.
CM	E-9	26407.	115853.	198455.	257350.	299341.
		1	5	10	15	20
CTA	E-2	14442.	63360.	108535.	140745.	163709.
CTA	E-3	11603.	50905.	87199.	113077.	131528.
CTA	E-4	12879.	56503.	96789.	125512.	145992.
CTA	E-5	16273.	71393.	122296.	158589.	184465.
CTA	E-6	18326.	80400.	137724.	178596.	207737.
CTA	E-7	21135.	92724.	158835.	205971.	239579.
CTA	E-8	23252.	102012.	174745.	226602.	263577.
CTA	E-9	24691.	108325.	185559.	240626.	279889.
		1	5	10	15	20
CTI	E-2	14474.	63501.	108776.	141056.	164072.
CTI	E-3	11624.	50997.	87357.	113282.	131766.
CTI	E-4	13381.	58705.	100562.	130405.	151682.
CTI	E-5	15612.	68493.	117328.	152147.	176972.
CTI	E-6	18724.	82146.	140716.	182475.	212249.
CTI	E-7	21180.	92921.	159173.	206410.	240089.
CTI	E-8	23633.	103683.	177608.	230316.	267895.
CTI	E-9	25364.	111277.	190617.	247185.	287517.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
CTM	E-2	12137.	53248.	91213.	118281.	137581.
CTM	E-3	13944.	61175.	104793.	135891.	158064.
CTM	E-4	15338.	67291.	115269.	149477.	173866.
CTM	E-5	17044.	74776.	128090.	166102.	193205.
CTM	E-6	22091.	96918.	166019.	215288.	250416.
CTM	E-7	24564.	107768.	184605.	239389.	278449.
CTM	E-8	26515.	116327.	199267.	258402.	300565.
CTM	E-9	26427.	115941.	198605.	257544.	299567.
		1	5	10	15	20
CTO	E-2	14659.	64312.	110166.	142859.	166169.
CTO	E-3	12068.	52945.	90694.	117609.	136799.
CTO	E-4	13230.	58043.	99427.	128933.	149971.
CTO	E-5	15119.	66330.	113623.	147342.	171384.
CTO	E-6	17894.	78505.	134478.	174386.	202840.
CTO	E-7	20653.	90609.	155212.	201274.	234115.
CTO	E-8	23512.	103152.	176699.	229136.	266524.
CTO	E-9	25195.	110536.	189347.	245538.	285602.
		1	5	10	15	20
CTR	E-2	11269.	49440.	84689.	109822.	127741.
CTR	E-3	11686.	51269.	87823.	113886.	132468.
CTR	E-4	12296.	53945.	92408.	119831.	139383.
CTR	E-5	22385.	98208.	168229.	218153.	253749.
CTR	E-6	20864.	91535.	156798.	203330.	236507.
CTR	E-7	22142.	97142.	166403.	215785.	250994.
CTR	E-8	24012.	105346.	180456.	234009.	272192.
CTR	E-9	25950.	113848.	195021.	252896.	294160.
		1	5	10	15	20
CTT	E-2	14224.	62404.	106897.	138620.	161238.
CTT	E-3	11251.	49361.	84554.	109647.	127537.
CTT	E-4	13009.	57073.	97766.	126779.	147465.
CTT	E-5	14730.	64624.	110700.	143551.	166974.
CTT	E-6	19400.	85112.	145796.	189063.	219912.
CTT	E-7	21188.	92956.	159233.	206488.	240180.
CTT	E-8	23619.	103622.	177503.	230179.	267737.
CTT	E-9	25853.	113423.	194292.	251951.	293061.
		1	5	10	15	20
DK	E-2	15595.	68419.	117200.	151981.	176779.
DK	E-3	11636.	51050.	87447.	113399.	131902.
DK	E-4	13126.	57587.	98645.	127919.	148792.
DK	E-5	15236.	66844.	114502.	148483.	172710.
DK	E-6	18659.	81861.	140227.	181841.	211512.
DK	E-7	21200.	93009.	159323.	206605.	240316.
DK	E-8	22934.	100616.	172355.	223503.	259972.
DK	E-9	25669.	112615.	192909.	250157.	290975.
		1	5	10	15	20
DM	E-2	15480.	67914.	116336.	150860.	175476.
DM	E-3	11463.	50291.	86147.	111713.	129941.
DM	E-4	12495.	54818.	93903.	121770.	141639.
DM	E-5	14981.	65725.	112586.	145997.	169819.
DM	E-6	18629.	81729.	140002.	181549.	211172.
DM	E-7	21222.	93105.	159489.	206819.	240565.
DM	E-8	22414.	98335.	168447.	218436.	254077.
DM	E-9	25023.	109781.	188054.	243862.	283652.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
DP	E-2	14495.	63593.	108934.	141261.	164310.
DP	E-3	11788.	51716.	88590.	114880.	133625.
DP	E-4	12876.	56490.	96766.	125483.	145958.
DP	E-5	14989.	65760.	112646.	146075.	169910.
DP	E-6	18714.	82102.	140640.	182377.	212135.
DP	E-7	23814.	104477.	178968.	232079.	269947.
DP	E-8	24985.	109615.	187769.	243491.	283221.
DP	E-9	26625.	116810.	200094.	259474.	301812.
DS	E-2	11985.	52581.	90070.	116800.	135858.
DS	E-3	14419.	63259.	108362.	140520.	163449.
DS	E-4	15813.	69375.	118839.	154106.	179251.
DS	E-5	17644.	77408.	132599.	171950.	200006.
DS	E-6	19218.	84314.	144428.	187289.	217849.
DS	E-7	23584.	103468.	177240.	229838.	267340.
DS	E-8	25878.	113532.	194480.	252194.	293344.
DS	E-9	27335.	119925.	205429.	266393.	309860.
DT	E-2	13836.	60702.	103981.	134839.	156840.
DT	E-3	10325.	45298.	77595.	100622.	117041.
DT	E-4	12132.	53226.	91175.	118232.	137524.
DT	E-5	15208.	66721.	114292.	148210.	172393.
DT	E-6	18489.	81115.	138949.	180185.	209585.
DT	E-7	21158.	92825.	159008.	206195.	239840.
DT	E-8	22988.	100853.	172761.	224030.	260584.
DT	E-9	25089.	110071.	188550.	244505.	284400.
EA	E-2	10107.	44342.	75957.	98498.	114569.
EA	E-3	10631.	46640.	79895.	103604.	120509.
EA	E-4	13801.	60548.	103718.	134498.	156443.
EA	E-5	18311.	80334.	137612.	178450.	207567.
EA	E-6	23891.	104815.	179547.	232830.	270820.
EA	E-7	29306.	128572.	220242.	285602.	332203.
EA	E-8	34347.	150688.	258126.	334729.	389346.
EA	E-9	36258.	159072.	272488.	353352.	411008.
EM	E-2	10525.	46175.	79098.	102571.	119308.
EM	E-3	10939.	47992.	82209.	106606.	124001.
EM	E-4	12669.	55582.	95211.	123466.	143611.
EM	E-5	15222.	66782.	114397.	148346.	172551.
EM	E-6	18515.	81229.	139145.	180438.	209880.
EM	E-7	22804.	100046.	171378.	222236.	258498.
EM	E-8	26285.	115318.	197538.	256161.	297958.
EM	E-9	27737.	121688.	208450.	270311.	314417.
EN	E-2	10498.	46057.	78895.	102308.	119002.
EN	E-3	10912.	47873.	82006.	106343.	123695.
EN	E-4	12791.	56117.	96128.	124655.	144994.
EN	E-5	15663.	68717.	117711.	152644.	177550.
EN	E-6	19166.	84085.	144037.	186782.	217259.
EN	E-7	22513.	98769.	169191.	219401.	255199.
EN	E-8	25033.	109825.	188129.	243959.	283765.
EN	E-9	26534.	116410.	199410.	258587.	300780.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
EO	E-2	14628.	64176.	109933.	142557.	165818.
EO	E-3	11235.	49290.	84434.	109491.	127356.
EO	E-4	13037.	57196.	97976.	127052.	147783.
EO	E-5	20296.	89043.	152529.	197795.	230068.
EO	E-6	23235.	101937.	174617.	226437.	263384.
EO	E-7	27958.	122658.	210111.	272465.	316922.
EO	E-8	28470.	124904.	213959.	277455.	322726.
EO	E-9	26337.	115546.	197929.	256667.	298547.
		1	5	10	15	20
ET	E-2	12349.	54178.	92806.	120347.	139984.
ET	E-3	12763.	55994.	95917.	124382.	144677.
ET	E-4	15871.	69629.	119275.	154671.	179908.
ET	E-5	17967.	78825.	135026.	175097.	203668.
ET	E-6	19823.	86968.	148975.	193185.	224707.
ET	E-7	23813.	104473.	178961.	232070.	269936.
ET	E-8	27115.	118959.	203776.	264249.	307366.
ET	E-9	29260.	128370.	219896.	285153.	331681.
		1	5	10	15	20
ETN	E-2	12850.	56376.	96571.	125230.	145663.
ETN	E-3	13264.	58192.	99682.	129264.	150356.
ETN	E-4	16838.	73872.	126542.	164095.	190870.
ETN	E-5	18858.	82734.	141723.	183781.	213768.
ETN	E-6	18772.	82357.	141076.	182943.	212793.
ETN	E-7	21212.	93062.	159413.	206722.	240452.
ETN	E-8	23708.	104012.	178172.	231046.	268746.
ETN	E-9	25463.	111712.	191361.	248150.	288640.
		1	5	10	15	20
ETR	E-2	13145.	57670.	98788.	128105.	149007.
ETR	E-3	13559.	59486.	101899.	132139.	153700.
ETR	E-4	16612.	72880.	124843.	161892.	188308.
ETR	E-5	19692.	86393.	147990.	191908.	223222.
ETR	E-6	18252.	80075.	137168.	177875.	206898.
ETR	E-7	21234.	93158.	159579.	206936.	240701.
ETR	E-8	23722.	104074.	178277.	231183.	268904.
ETR	E-9	25475.	111764.	191451.	248267.	288776.
		1	5	10	15	20
EW	E-2	11641.	51072.	87485.	113447.	131958.
EW	E-3	12055.	52888.	90596.	117482.	136651.
EW	E-4	13482.	59148.	101321.	131389.	152827.
EW	E-5	15706.	68906.	118035.	153063.	178038.
EW	E-6	18162.	79681.	136492.	176998.	205878.
EW	E-7	21502.	94334.	161593.	209548.	243739.
EW	E-8	23440.	102836.	176157.	228435.	265708.
EW	E-9	26251.	115169.	197283.	255829.	297572.
		1	5	10	15	20
FT	E-2	14229.	62426.	106934.	138669.	161295.
FT	E-3	14662.	64325.	110189.	142889.	166203.
FT	E-4	18789.	82431.	141204.	183108.	212986.
FT	E-5	17291.	75859.	129946.	168510.	196005.
FT	E-6	19844.	87060.	149133.	193390.	224945.
FT	E-7	26298.	115375.	197636.	256287.	298105.
FT	E-8	28386.	124536.	213328.	276636.	321774.
FT	E-9	30273.	132814.	227509.	295026.	343164.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
FTB	E-2	17255.	75701.	129676.	168159.	195597.
FTB	E-3	17688.	77601.	132930.	172378.	200505.
FTB	E-4	27680.	121438.	208022.	269756.	313771.
FTB	E-5	20407.	89530.	153364.	198877.	231327.
FTB	E-6	26062.	114340.	195862.	253987.	295430.
FTB	E-7	48917.	214609.	367623.	476721.	554506.
FTB	E-8	45615.	200123.	342808.	444541.	517076.
FTB	E-9	41422.	181727.	311297.	403678.	469545.
		1	5	10	15	20
FTG	E-2	13664.	59947.	102688.	133163.	154890.
FTG	E-3	14078.	61763.	105800.	137197.	159583.
FTG	E-4	17619.	77298.	132411.	171706.	199723.
FTG	E-5	15960.	70020.	119943.	155538.	180917.
FTG	E-6	18649.	81817.	140152.	181744.	211399.
FTG	E-7	21781.	95558.	163690.	212267.	246902.
FTG	E-8	24356.	106855.	183041.	237362.	276091.
FTG	E-9	27051.	118679.	203295.	263626.	306641.
		1	5	10	15	20
FTM	E-2	16110.	70678.	121071.	157000.	182617.
FTM	E-3	16524.	72494.	124182.	161035.	187310.
FTM	E-4	16428.	72073.	123461.	160099.	186222.
FTM	E-5	17775.	77983.	133584.	173226.	201491.
FTM	E-6	20196.	88604.	151778.	196820.	228935.
FTM	E-7	32782.	143822.	246365.	319477.	371605.
FTM	E-8	33230.	145787.	249732.	323843.	376684.
FTM	E-9	31501.	138202.	236738.	306993.	357084.
		1	5	10	15	20
GM	E-2	11844.	51962.	89011.	115426.	134259.
GM	E-3	12258.	53778.	92122.	119460.	138952.
GM	E-4	13736.	60263.	103229.	133864.	155706.
GM	E-5	15045.	66006.	113067.	146621.	170545.
GM	E-6	18451.	80949.	138664.	179814.	209154.
GM	E-7	22366.	98124.	168086.	217968.	253533.
GM	E-8	24212.	106223.	181959.	235958.	274459.
GM	E-9	26284.	115314.	197531.	256151.	297946.
		1	5	10	15	20
GMM	E-2	11596.	50874.	87147.	113009.	131448.
GMM	E-3	12010.	52690.	90258.	117044.	136141.
GMM	E-4	13367.	58644.	100456.	130268.	151524.
GMM	E-5	15326.	67238.	115179.	149360.	173730.
GMM	E-6	18456.	80970.	138701.	179863.	209211.
GMM	E-7	22571.	99024.	169627.	219966.	255857.
GMM	E-8	24403.	107061.	183395.	237820.	276624.
GMM	E-9	26462.	116094.	198869.	257886.	299964.
		1	5	10	15	20
GMM	E-2	13106.	57499.	98495.	127725.	148565.
GMM	E-3	13520.	59315.	101606.	131759.	153258.
GMM	E-4	15286.	67063.	114878.	148970.	173277.
GMM	E-5	15533.	68147.	116734.	151377.	176077.
GMM	E-6	19150.	84015.	143917.	186626.	217078.
GMM	E-7	22787.	99971.	171250.	222071.	258305.
GMM	E-8	24620.	108013.	185025.	239934.	279084.
GMM	E-9	27330.	119903.	205392.	266345.	309803.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
GMT	E-2	11736.	51488.	88199.	114373.	133035.
GMT	E-3	12150.	53305.	91310.	118408.	137728.
GMT	E-4	14221.	62391.	106874.	138591.	161204.
GMT	E-5	16162.	70906.	121461.	157507.	183207.
GMT	E-6	20463.	89776.	153785.	199422.	231961.
GMT	E-7	24191.	106131.	181801.	235753.	274221.
GMT	E-8	25750.	112971.	193518.	250947.	291893.
GMT	E-9	26738.	117305.	200943.	260575.	303093.
		1	5	10	15	20
HM	E-2	13623.	59767.	102380.	132763.	154426.
HM	E-3	10196.	44732.	76625.	99365.	115578.
HM	E-4	12360.	54226.	92888.	120454.	140109.
HM	E-5	14429.	63303.	108438.	140618.	163562.
HM	E-6	17315.	75965.	130127.	168743.	196277.
HM	E-7	20934.	91842.	157324.	204012.	237301.
HM	E-8	23327.	102341.	175308.	227333.	264427.
HM	E-9	25706.	112778.	193187.	250518.	291394.
		1	5	10	15	20
HT	E-2	10669.	46807.	80180.	103975.	120940.
HT	E-3	11083.	48624.	83292.	108009.	125633.
HT	E-4	12762.	55990.	95910.	124372.	144666.
HT	E-5	15939.	69928.	119786.	155334.	180679.
HT	E-6	19156.	84042.	143962.	186685.	217146.
HT	E-7	22283.	97760.	167462.	217159.	252592.
HT	E-8	24112.	105785.	181208.	234984.	273325.
HT	E-9	25533.	112019.	191887.	248832.	289433.
		1	5	10	15	20
IC	E-2	10824.	47487.	81345.	105485.	122697.
IC	E-3	11239.	49308.	84464.	109530.	127401.
IC	E-4	13429.	58916.	100922.	130872.	152226.
IC	E-5	15721.	68971.	118147.	153209.	178208.
IC	E-6	19065.	83642.	143278.	185798.	216114.
IC	E-7	23296.	102205.	175075.	227031.	264075.
IC	E-8	25048.	109891.	188242.	244105.	283935.
IC	E-9	25519.	111957.	191782.	248696.	289274.
		1	5	10	15	20
IM	E-2	12457.	54652.	93617.	121400.	141208.
IM	E-3	12871.	56468.	96729.	125434.	145901.
IM	E-4	14040.	61597.	105514.	136827.	159153.
IM	E-5	16166.	70924.	121492.	157546.	183252.
IM	E-6	18724.	82146.	140716.	182475.	212249.
IM	E-7	21880.	95992.	164434.	213232.	248024.
IM	E-8	23958.	105109.	180050.	233483.	271580.
IM	E-9	26016.	114138.	195517.	253539.	294908.
		1	5	10	15	20
IS	E-2	14493.	63584.	108919.	141242.	164288.
IS	E-3	11484.	50383.	86305.	111917.	130179.
IS	E-4	12773.	56038.	95992.	124479.	144790.
IS	E-5	14572.	63931.	109512.	142011.	165183.
IS	E-6	17644.	77408.	132599.	171950.	200006.
IS	E-7	21062.	92404.	158286.	205260.	238751.
IS	E-8	23536.	103258.	176879.	229370.	266796.
IS	E-9	25262.	110830.	189850.	246191.	286361.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
JO	E-2	15184.	66615.	114112.	147976.	172121.
JO	E-3	11356.	49821.	85343.	110670.	128728.
JO	E-4	12713.	55775.	95541.	123895.	144110.
JO	E-5	14184.	62228.	106596.	138230.	160785.
JO	E-6	18360.	80549.	137980.	178927.	208123.
JO	E-7	20413.	89556.	153409.	198935.	231395.
JO	E-8	23031.	101042.	173084.	224449.	261071.
JO	E-9	25048.	109891.	188242.	244105.	283935.
		1	5	10	15	20
LI	E-2	15954.	69994.	119898.	155480.	180849.
LI	E-3	12445.	54599.	93527.	121283.	141072.
LI	E-4	13024.	57139.	97879.	126925.	147636.
LI	E-5	14405.	63198.	108257.	140384.	163290.
LI	E-6	18219.	79931.	136920.	177553.	206524.
LI	E-7	20827.	91373.	156520.	202970.	236088.
LI	E-8	22982.	100827.	172715.	223971.	260516.
LI	E-9	25017.	109755.	188009.	243803.	283584.
		1	5	10	15	20
LN	E-2	14670.	64360.	110249.	142967.	166294.
LN	E-3	10919.	47904.	82059.	106411.	123774.
LN	E-4	13151.	57696.	98833.	128163.	149075.
LN	E-5	15285.	67059.	114871.	148960.	173265.
LN	E-6	20372.	89376.	153101.	198535.	230930.
LN	E-7	26326.	115498.	197846.	256560.	298422.
LN	E-8	27483.	120574.	206542.	267836.	311538.
LN	E-9	28552.	125264.	214575.	278254.	323655.
		1	5	10	15	20
MA	E-2	14737.	64654.	110752.	143619.	167053.
MA	E-3	10971.	48132.	82450.	106918.	124363.
MA	E-4	13264.	58192.	99682.	129264.	150356.
MA	E-5	15632.	68581.	117478.	152342.	177199.
MA	E-6	19101.	83800.	143549.	186149.	216522.
MA	E-7	21638.	94931.	162615.	210873.	245281.
MA	E-8	23952.	105083.	180005.	233424.	271511.
MA	E-9	25544.	112067.	191970.	248939.	289558.
		1	5	10	15	20
ML	E-2	10401.	45631.	78166.	101363.	117902.
ML	E-3	10815.	47448.	81277.	105398.	122595.
ML	E-4	12671.	55590.	95226.	123485.	143634.
ML	E-5	14989.	65760.	112646.	146075.	169910.
ML	E-6	18134.	79558.	136282.	176725.	205561.
ML	E-7	22016.	96589.	165456.	214557.	249566.
ML	E-8	22928.	100590.	172310.	223445.	259904.
ML	E-9	25182.	110479.	189249.	245411.	285454.
		1	5	10	15	20
MM	E-2	10683.	46869.	80285.	104111.	121099.
MM	E-3	11097.	48685.	83397.	108146.	125792.
MM	E-4	13001.	57038.	97706.	126701.	147375.
MM	E-5	15911.	69805.	119575.	155061.	180362.
MM	E-6	19103.	83809.	143564.	186168.	216545.
MM	E-7	22377.	98173.	168169.	218075.	253658.
MM	E-8	25581.	112229.	192248.	249300.	289977.
MM	E-9	27081.	118810.	203520.	263918.	306981.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
MN	E-2	11016.	48330.	82788.	107356.	124874.
MN	E-3	11430.	50146.	85899.	111391.	129566.
MN	E-4	12631.	55415.	94925.	123095.	143181.
MN	E-5	15681.	68796.	117847.	152819.	177754.
MN	E-6	19276.	84568.	144864.	187854.	218506.
MN	E-7	21913.	96137.	164682.	213553.	248398.
MN	E-8	24149.	105947.	181486.	235344.	273745.
MN	E-9	25754.	112988.	193548.	250986.	291938.
		1	5	10	15	20
MR	E-2	10854.	47619.	81571.	105778.	123037.
MR	E-3	11268.	49435.	84682.	109812.	127730.
MR	E-4	13452.	59017.	101095.	131097.	152487.
MR	E-5	16230.	71205.	121972.	158170.	183978.
MR	E-6	19000.	83357.	142790.	185165.	215377.
MR	E-7	21662.	95036.	162795.	211107.	245553.
MR	E-8	23792.	104381.	178803.	231865.	269698.
MR	E-9	25279.	110904.	189978.	246357.	286554.
		1	5	10	15	20
MS	E-2	10718.	47022.	80548.	104452.	121496.
MS	E-3	11167.	48992.	83923.	108828.	126585.
MS	E-4	13267.	58205.	99705.	129294.	150390.
MS	E-5	16886.	74083.	126902.	164563.	191414.
MS	E-6	20066.	88034.	150801.	195553.	227461.
MS	E-7	22940.	100643.	172400.	223562.	260040.
MS	E-8	25219.	110641.	189527.	245772.	285874.
MS	E-9	26837.	117740.	201687.	261540.	304215.
		1	5	10	15	20
MT	E-2	17420.	76425.	130916.	169767.	197467.
MT	E-3	26666.	116989.	200402.	259874.	302276.
MT	E-4	28503.	125049.	214207.	277776.	323100.
MT	E-5	21299.	93443.	160067.	207569.	241438.
MT	E-6	21844.	95834.	164163.	212881.	247616.
MT	E-7	26072.	114383.	195938.	254085.	295543.
MT	E-8	27892.	122368.	209615.	271822.	316174.
MT	E-9	30640.	134424.	230267.	298602.	347324.
		1	5	10	15	20
MU	E-2	17535.	76930.	131780.	170887.	198771.
MU	E-3	19106.	83822.	143586.	186198.	216579.
MU	E-4	15257.	66936.	114660.	148687.	172948.
MU	E-5	15851.	69542.	119124.	154476.	179681.
MU	E-6	19615.	86055.	147412.	191158.	222349.
MU	E-7	24399.	107044.	183365.	237781.	276579.
MU	E-8	26272.	115261.	197441.	256034.	297810.
MU	E-9	27200.	119332.	204415.	265078.	308330.
		1	5	10	15	20
NC	E-2	14514.	63676.	109076.	141446.	164526.
NC	E-3	10802.	47391.	81180.	105271.	122448.
NC	E-4	12532.	54981.	94181.	122131.	142058.
NC	E-5	14490.	63571.	108896.	141212.	164254.
NC	E-6	19266.	84524.	144789.	187757.	218393.
NC	E-7	21264.	93290.	159804.	207228.	241041.
NC	E-8	23796.	104398.	178833.	231904.	269743.
NC	E-9	26142.	114691.	196464.	254767.	296337.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
OM	E-2	11739.	51502.	88222.	114402.	133069.
OM	E-3	12153.	53318.	91333.	118437.	137762.
OM	E-4	14501.	63619.	108979.	141320.	164378.
OM	E-5	15569.	68305.	117005.	151728.	176485.
OM	E-6	18386.	80663.	138175.	179181.	208417.
OM	E-7	20916.	91763.	157189.	203837.	237096.
OM	E-8	22890.	100423.	172024.	223075.	259473.
OM	E-9	25650.	112532.	192766.	249972.	290759.
OS	E-2	12354.	54200.	92843.	120396.	140041.
OS	E-3	12768.	56016.	95955.	124431.	144734.
OS	E-4	14108.	61895.	106025.	137490.	159923.
OS	E-5	15819.	69401.	118884.	154164.	179319.
OS	E-6	20942.	91877.	157384.	204090.	237391.
OS	E-7	27377.	120109.	205745.	266803.	310336.
OS	E-8	31117.	136517.	233852.	303251.	352731.
OS	E-9	29313.	128602.	220295.	285670.	332282.
OT	E-2	14257.	62549.	107145.	138942.	161612.
OT	E-3	11114.	48760.	83524.	108312.	125984.
OT	E-4	12698.	55709.	95429.	123748.	143940.
OT	E-5	14771.	64804.	111008.	143951.	167439.
OT	E-6	17994.	78944.	135229.	175361.	203974.
OT	E-7	21273.	93329.	159872.	207316.	241143.
OT	E-8	23751.	104201.	178495.	231465.	269233.
OT	E-9	26285.	115318.	197538.	256161.	297958.
PC	E-2	15937.	69919.	119771.	155314.	180656.
PC	E-3	11452.	50242.	86065.	111606.	129816.
PC	E-4	12605.	55301.	94730.	122842.	142886.
PC	E-5	15233.	66830.	114480.	148453.	172676.
PC	E-6	19047.	83563.	143143.	185623.	215910.
PC	E-7	21213.	93066.	159421.	206731.	240463.
PC	E-8	23140.	101520.	173903.	225511.	262307.
PC	E-9	25624.	112418.	192571.	249719.	290465.
PH	E-2	14538.	63781.	109257.	141680.	164798.
PH	E-3	10648.	46715.	80022.	103770.	120702.
PH	E-4	12773.	56038.	95992.	124479.	144790.
PH	E-5	15354.	67361.	115389.	149632.	174048.
PH	E-6	19744.	86621.	148381.	192415.	223811.
PH	E-7	23503.	103113.	176631.	229049.	266422.
PH	E-8	24306.	106636.	182666.	236874.	275524.
PH	E-9	26010.	114111.	195472.	253481.	294840.
PM	E-2	10254.	44987.	77061.	99930.	116236.
PM	E-3	11035.	48413.	82931.	107542.	125089.
PM	E-4	12289.	53914.	92355.	119763.	139304.
PM	E-5	14312.	62790.	107558.	139478.	162236.
PM	E-6	17052.	74811.	128150.	166180.	193296.
PM	E-7	21453.	94119.	161225.	209070.	243184.
PM	E-8	22446.	98475.	168687.	218748.	254440.
PM	E-9	25050.	109900.	188257.	244125.	283958.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
SM	E-2	15134.	66396.	113736.	147488.	171554.
SM	E-3	12047.	52853.	90536.	117404.	136561.
SM	E-4	13390.	58745.	100629.	130492.	151784.
SM	E-5	16006.	70222.	120289.	155987.	181438.
SM	E-6	20864.	91535.	156798.	203330.	236507.
SM	E-7	25087.	110062.	188535.	244485.	284377.
SM	E-8	25162.	110391.	189099.	245216.	285228.
SM	E-9	26096.	114489.	196118.	254319.	295815.
		1	5	10	15	20
ST	E-2	12665.	55564.	95181.	123427.	143566.
ST	E-3	13079.	57380.	98292.	127461.	148259.
ST	E-4	14660.	64317.	110174.	142869.	166181.
ST	E-5	19055.	83598.	143203.	185701.	216001.
ST	E-6	22093.	96927.	166034.	215307.	250439.
ST	E-7	25509.	111913.	191706.	248598.	289161.
ST	E-8	30456.	133617.	228884.	296809.	345239.
ST	E-9	29028.	127352.	218153.	282893.	329051.
		1	5	10	15	20
STG	E-2	12115.	53151.	91047.	118067.	137331.
STG	E-3	12529.	54967.	94159.	122101.	142024.
STG	E-4	13905.	61004.	104500.	135511.	157622.
STG	E-5	17618.	77294.	132404.	171696.	199711.
STG	E-6	22119.	97041.	166230.	215561.	250733.
STG	E-7	25475.	111764.	191451.	248267.	288776.
STG	E-8	29201.	128111.	219453.	284578.	331012.
STG	E-9	29465.	129269.	221437.	287151.	334005.
		1	5	10	15	20
STS	E-2	13621.	59758.	102365.	132744.	154403.
STS	E-3	14035.	61575.	105477.	136778.	159096.
STS	E-4	15616.	68511.	117358.	152186.	177018.
STS	E-5	20002.	87753.	150320.	194930.	226736.
STS	E-6	21546.	94527.	161924.	209977.	244238.
STS	E-7	23673.	103859.	177908.	230705.	268349.
STS	E-8	26858.	117832.	201845.	261745.	304453.
STS	E-9	27789.	121916.	208841.	270818.	315006.
		1	5	10	15	20
SW	E-2	14723.	64593.	110647.	143483.	166895.
SW	E-3	11351.	49799.	85306.	110621.	128671.
SW	E-4	13544.	59420.	101787.	131993.	153530.
SW	E-5	15947.	69963.	119846.	155412.	180770.
SW	E-6	21260.	93272.	159774.	207189.	240996.
SW	E-7	25075.	110009.	188445.	244369.	284241.
SW	E-8	25961.	113897.	195103.	253003.	294285.
SW	E-9	26730.	117270.	200883.	260497.	303002.
		1	5	10	15	20
TD	E-2	11014.	48321.	82773.	107337.	124851.
TD	E-3	11428.	50137.	85884.	111372.	129544.
TD	E-4	12928.	56718.	97157.	125990.	146547.
TD	E-5	15103.	66260.	113503.	147186.	171202.
TD	E-6	18495.	81142.	138995.	180243.	209653.
TD	E-7	21524.	94430.	161758.	209762.	243989.
TD	E-8	23238.	101950.	174639.	226466.	263418.
TD	E-9	25094.	110093.	188588.	244554.	284457.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
PN	E-2	14331.	62873.	107701.	139663.	162451.
PN	E-3	11560.	50716.	86876.	112658.	131040.
PN	E-4	13092.	57437.	98390.	127588.	148406.
PN	E-5	14523.	63716.	109144.	141534.	164628.
PN	E-6	18435.	80878.	138544.	179658.	208973.
PN	E-7	20765.	91101.	156054.	202365.	235385.
PN	E-8	22886.	100406.	171994.	223036.	259428.
PN	E-9	24924.	109347.	187310.	242897.	282530.
		1	5	10	15	20
PR	E-2	14383.	63101.	108092.	140170.	163041.
PR	E-3	11299.	49571.	84915.	110114.	128082.
PR	E-4	12939.	56766.	97240.	126097.	146672.
PR	E-5	15499.	67997.	116479.	151046.	175691.
PR	E-6	19748.	86639.	148411.	192454.	223856.
PR	E-7	22161.	97225.	166545.	215970.	251209.
PR	E-8	23585.	103472.	177247.	229848.	267351.
PR	E-9	25296.	110979.	190106.	246522.	286747.
		1	5	10	15	20
QM	E-2	14978.	65712.	112563.	145968.	169785.
QM	E-3	11591.	50852.	87109.	112960.	131392.
QM	E-4	13233.	58056.	99449.	128962.	150005.
QM	E-5	15326.	67238.	115179.	149360.	173730.
QM	E-6	18935.	83072.	142301.	184531.	214641.
QM	E-7	23370.	102529.	175631.	227752.	264914.
QM	E-8	25865.	113475.	194382.	252067.	293197.
QM	E-9	26999.	118450.	202904.	263119.	306051.
		1	5	10	15	20
RM	E-2	11773.	51651.	88477.	114734.	133455.
RM	E-3	12187.	53467.	91588.	118768.	138148.
RM	E-4	13246.	58113.	99547.	129089.	150152.
RM	E-5	15595.	68419.	117200.	151981.	176779.
RM	E-6	19942.	87490.	149869.	194345.	226056.
RM	E-7	23161.	101612.	174061.	225716.	262545.
RM	E-8	24928.	109365.	187340.	242936.	282575.
RM	E-9	25884.	113559.	194525.	252253.	293412.
		1	5	10	15	20
SH	E-2	11960.	52471.	89882.	116556.	135574.
SH	E-3	12374.	54287.	92994.	120591.	140267.
SH	E-4	14240.	62474.	107017.	138776.	161420.
SH	E-5	16050.	70415.	120620.	156415.	181937.
SH	E-6	19083.	83721.	143414.	185973.	216318.
SH	E-7	21293.	93417.	160022.	207511.	241370.
SH	E-8	23287.	102165.	175008.	226944.	263973.
SH	E-9	26021.	114160.	195554.	253588.	294965.
		1	5	10	15	20
SK	E-2	15521.	68094.	116644.	151260.	175941.
SK	E-3	11891.	52168.	89364.	115884.	134792.
SK	E-4	13257.	58161.	99630.	129196.	150277.
SK	E-5	15040.	65984.	113029.	146572.	170488.
SK	E-6	18482.	81085.	138897.	180116.	209505.
SK	E-7	21892.	96045.	164524.	213349.	248160.
SK	E-8	23739.	104148.	178405.	231349.	269097.
SK	E-9	25794.	113164.	193848.	251376.	292392.

*Cost figures for these years reflect a 7 percent discount rate.

Rating	Pay Grade	Years				
		1	5*	10*	15*	20*
TM	E-2	11487.	50396.	86328.	111947.	130213.
TM	E-3	11904.	52225.	89462.	116010.	134940.
TM	E-4	14539.	63786.	109264.	141690.	164809.
TM	E-5	16520.	72477.	124152.	160996.	187265.
TM	E-6	20619.	90460.	154957.	200943.	233730.
TM	E-7	24268.	106469.	182380.	236504.	275094.
TM	E-8	27542.	120833.	206985.	268411.	312206.
TM	E-9	28478.	124939.	214019.	277532.	322817.
		1	5	10	15	20
UT	E-2	11350.	49795.	85298.	110611.	128660.
UT	E-3	11750.	51550.	88304.	114510.	133194.
UT	E-4	13657.	59916.	102636.	133094.	154811.
UT	E-5	16696.	73249.	125475.	162711.	189260.
UT	E-6	20013.	87801.	150403.	195037.	226860.
UT	E-7	22242.	97580.	167154.	216760.	252128.
UT	E-8	25325.	111106.	190324.	246805.	287075.
UT	E-9	28604.	125492.	214966.	278760.	324245.
		1	5	10	15	20
YN	E-2	15568.	68300.	116997.	151718.	176473.
YN	E-3	11260.	49400.	84622.	109734.	127639.
YN	E-4	12628.	55402.	94903.	123066.	143147.
YN	E-5	14283.	62663.	107340.	139195.	161907.
YN	E-6	18032.	79110.	135515.	175731.	204404.
YN	E-7	20777.	91153.	156144.	202482.	235521.
YN	E-8	25569.	112177.	192157.	249183.	289841.
YN	E-9	26001.	114072.	195404.	253393.	294738.

*Cost figures for these years reflect a 7 percent discount rate.

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